

SYLLABUS
11:709:255 Nutrition and Health
Fall 2016
Tuesdays and Fridays, 10:55 – 12:15 PM
101 Hickman Hall

SAKAI Site: NUTRITION AND HEALTH 01 F16

Instructor: Joshua W. Miller, Ph.D.

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Office Hours: Fridays, 1:00 – 3:00 PM

Required Text:

McGuire M and Beerman KA. Nutritional Sciences: From Fundamentals to Food (with Table of Food Composition Booklet), 3rd Edition: Michelle 'Shelley' McGuire; Kathy A. Beerman, 2013. Textbook ISBN-10: 0-8400-5820-9; Textbook ISBN-13: 978-0-8400-5820-1

The 3rd edition is preferred, but the 2nd edition is similar enough to use. This text has been used for this course for several years and many used copies are available. You are highly encouraged to buy a used book! There also is a digital version for rent or purchase.

Required App:

Tophat (see invitation e-mail)

\$24/semester or \$36/year or \$72/lifetime

Overview:

This course is for the purpose of giving the student an introduction and firm foundation in the science of nutrition, and it emphasizes how nutrition influences health and wellbeing. Those who take the course are from varied backgrounds. Some take the class because they are majoring in nutrition, biology, or other science or health-related discipline. Others take the course because they have an interest in nutrition (as all should!), but only have a limited science background (e.g. high school chemistry and biology). This represents a challenge in teaching the class. In order to provide a deep enough foundation for the nutrition and science majors, we do touch on aspects of chemistry, biochemistry, and physiology. However, this should not deter the non-science majors! There are no prerequisites of college level science courses for the class, and aspects of chemistry, biochemistry, and physiology will be presented

at a level that both majors and non-majors can understand. It is our experience that students who attend lectures and read the text on a consistent basis, more often than not, receive a “good” grade. By the end of the course, it is our goal that students will not only understand basic nutritional concepts and issues, but will begin to be able to understand the scientific basis for those concepts.

Grading: Grades will be calculated on a point system.

Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
Final Exam (not comprehensive)	100 points
Dietary Assignment	50 points
Online Quizzes	50 points
Total Points	500 points

Final Grade Allocation: There will be NO negotiating of grades. All final grade percentages will be rounded up to the higher whole number (e.g. “90.1%” will be rounded up to “91%”, but “90.0%” will remain “90%”). Final grade ranges are as follows:

A = 91-100%	C = 71-75%
B+ = 86-90%	D+ = 66-70%
B = 81-85%	D = 61-65%
C+ = 76-80%	F <61%

Online Quizzes: On weeks when there is not an exam, online quizzes will be assigned. These quizzes will be made available on Friday afternoons after class (i.e. sometime after 12:30 PM). You will have until 10:45 AM on the following Tuesday to complete the quiz. They will be administered through the class SAKAI site “quiz” feature. They will be multiple-choice questions and are designed to motivate you to read the assigned textbook chapters. The quizzes are open book and are graded pass/fail. They are worth 5 points each. Also, many quiz questions will appear on exams. The rationale is that by seeing the same questions more than once, your retention will be better.

Exams: All exams are mandatory – no exceptions! There will be 3 mid-term exams and a final exam.

- Exam 1 will cover all materials (lectures, readings, and online quizzes) from the 1st day of class to the day of exam 1.
- Exam 2 will cover all materials since exam 1 to the day of exam 2.
- Exam 3 will cover all materials since exam 2 to the day of exam 3.
- The final exam will cover all materials since exam 3 to the last day of classes (i.e. it is NOT comprehensive).

All exams will be closed book, closed notes. Do not touch or look at your cell phone during the exams. There will be NO make-up exams without an official doctor's note (on office or hospital letterhead). You must bring a student ID and a number 2 pencil to all exams. Your exam will NOT be accepted if your student ID is not presented. All exams will be given in 101 Hickman

Hall including the final exam. Dates for the 3 mid-term exams are listed in the course schedule. The day/time of the final exam will be announced later in the semester.

Diet Evaluation Project: Instructions and due date for the dietary assignment will be provided in class and on the SAKAI site.

Academic Integrity: The Rutgers Academic Policy states, "Students are responsible for understanding the principles of academic integrity fully and abiding by them in all their work at the University. Students are also encouraged to report alleged violations of academic integrity to the faculty member teaching the course in which the violation is alleged to have occurred." Please read the Rutgers University Interim Academic Integrity Policy, effective September 2, 2008 (and still in force), at <http://academicintegrity.rutgers.edu/integrity.shtml>.

Student Learning Outcomes for Nutrition and Health (11:709:255): After completing this course, the student will:

1. Be familiar with research methods in nutritional sciences
2. Have a working knowledge of dietary guidelines, methods of dietary assessment, and nutritional food labels
3. Be familiar with the digestive system and the roles of other important organs in the regulation of nutrient utilization
4. Have foundational and discerning knowledge of protein, carbohydrate and fat metabolism
5. Utilize food composition tables and nutrition software to calculate the nutrient intake and adequacy of their diet
6. Have foundational knowledge of how the body utilizes macronutrients to produce useable energy
7. Recognize the complexities of weight gain and loss and the magnitude of the obesity problem in the US and the world
8. Be familiar with the sources and functions of vitamins and minerals
9. Know which and under what circumstances dietary supplements are recommended
10. Understand the nutritional needs of individuals during different stages of life
11. Have a foundational knowledge of the role of nutrition in the development and treatment of chronic diseases
12. Be able to actively and effectively participate in the debate on food choices in society
13. Be familiar with current issues and research topics in health and nutritional sciences

School of Arts and Sciences Learning Goals:

1. 21st Century Challenges [21C]:
 - a) Analyze the degree to which forms of human difference shape a person's experiences of and perspectives on the world.
 - c) Analyze the relationship that science and technology have to a contemporary social issue.
2. Areas of Inquiry: Natural Sciences [NS]:
 - e) Understand and apply basic principles and concepts in the physical or biological sciences.
 - f) Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.

COURSE SCHEDULE
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Day	Date	Topic	Readings
Tuesday	September 6	Introduction to Course Syllabus Review A Brief History of Nutrition Definitions of Basic Nutrition Terms	Syllabus Chapter 1
Friday	September 9	The Science and Practice of Nutrition Dietary Guidelines Assessing Dietary Intake and Status	Chapters 1 + 2
Tuesday	September 13	Chemistry and Nutrition	Chapter 3
Friday	September 16	Digestion and Digestive Disorders	Chapter 3
Tuesday	September 20	Carbohydrates	Chapter 4
Friday	September 23	Diabetes	Chapter 4
Tuesday	September 27	Amino Acids and Proteins	Chapter 5
Friday	September 30	Protein Deficiency and Excess Protein Requirements Review for Exam 1	Chapter 5
Tuesday	October 4	Exam 1	Chapters 1-5
Friday	October 7	Lipids	Chapter 6
Tuesday	October 11	Lipids Cardiovascular Disease	Chapter 6
Friday	October 14	Energy Metabolism Dietary Assignment Assigned	Chapter 7
Tuesday	October 18	Energy Balance	Chapter 8
Friday	October 21	Obesity and Weight Regulation	Chapter 8
Tuesday	October 25	Nutrition & Physical Activity Review for Exam 2	Chapter 9
Friday	October 28	Exam 2	Chapters 6-9

Tuesday	November 1	Water Soluble Vitamins	Chapter 10
Friday	November 4	Water Soluble Vitamins	Chapter 10
Tuesday	November 8	Cancer Dietary Assignment Due	Chapter 11
Friday	November 11	Fat Soluble Vitamins (A, E, K)	Chapter 11
Tuesday	November 15	Vitamin D Bone-Related Major Minerals Bone Health	Chapter 11 + 12
Friday	November 18	Major Minerals and Water	Chapter 12
Wednesday	November 23	Trace Minerals	Chapter 13
Friday	November 25	No Class – Thanksgiving Break	
Tuesday	November 29	Trace Minerals Review for Exam 3	Chapters 10-13
Friday	December 2	Exam 3	Chapters 10-13
Tuesday	December 6	Special Topics Genetics and Epigenetics Cancer	
Friday	December 9	Life Cycle Nutrition I	Chapter 14
Tuesday (Last Class)	December 13	Life Cycle Nutrition II <u>Special Topic</u> Dietary Supplements Review for Final Exam	Chapter 14
Friday	December 23 8:00 – 11:00 AM	FINAL EXAM	Chapter 14 and Special Topics